



This Service Information bulletin supersedes SI B11 09 15 **dated May 2015**.

NEW designates changes to this revision

SUBJECT

NEW Engine Replacement and Engine Repairs

MODEL

All

INFORMATION

New and remanufactured replacement engine assemblies are **NOT** pre-filled with engine oil.

After replacing an engine with a new or remanufactured engine assembly, the engine oil level must be verified as outlined in the procedure below first, before starting the engine for the first time.

NEW If the new or remanufactured replacement engine is started to determine electronically if the engine is filled with the appropriate amount of engine oil, damage to the replacement engine can occur immediately.

The engine may have some residual engine oil from assembly, but this is **not enough** engine oil to properly lubricate the engine to measure the engine oil level electronically when it is started for the first time.

Further, the electronic engine oil measurement is only operational when the engine is running at its full operating temperature. Checking the engine oil without the engine running at operating temperature will lead to an incorrect or incomplete measurement.

NEW After replacing the engine or making engine repairs that require the replacement or removal of the engine bearings, VANOS gears, camshafts, bed plate resealing, engine oil pump, engine oil filter housing, cylinder head, engine oil cooler or anything that interrupts the engine oil supply circuit of the engine requires a short oil pump and oil supply circuit priming procedure.

PROCEDURE

The following procedure applies to all engines equipped with an electronic engine oil level sensor, with or without an engine oil dipstick.

NEW Replacement Engines:

1. **NEW** After installation of the replacement engine and before starting the engine for the first time, remove the engine oil drain plug. Drain any residual engine oil from the crankcase.
2. **NEW** Reinstall and torque the engine oil drain plug (with a new seal ring) per the applicable repair instruction.

3. **NEW** Remove the oil filter housing cover and verify the oil filter is present. Reinstall the oil filter housing cover and torque it to the proper specification noted in the applicable repair instruction.
4. **NEW** Fill the engine with the proper type and amount of engine oil, as specified in the applicable repair instruction.
5. **NEW** Connect a battery charger to the vehicle.
6. **NEW** Remove the electric fuel pump fuse. Refer to the applicable wiring diagram using the VIN number of the vehicle in ISTA/D.
7. **NEW** Crank the engine for 10 seconds.
8. **NEW** After 10 seconds have elapsed, stop the starter, and allow the starter to cool for 20 seconds.
9. **NEW** Repeat steps 7 and 8 two additional times.
10. **NEW** Reinstall the electric fuel pump fuse and start the engine. Verify proper engine operation.
11. **NEW** After the engine has reached operating temperature, check the engine oil electronically or with the dipstick, and top up the engine oil as needed.

NEW Engine Repairs:

1. **NEW** If the engine has been drained prior to the repair remove the engine oil drain plug again to remove any residual oil that may have settled in the engine oil pan during the repair if the engine oil pan was not removed entirely.
2. **NEW** Reinstall and torque the engine oil drain plug (with a new seal ring) per the applicable repair instruction.
3. **NEW** Remove the oil filter housing cover and verify the oil filter is present. Reinstall the oil filter housing cover and torque it to the proper specification noted in the applicable repair instruction.
4. **NEW** Fill the engine with the proper type and amount of engine oil, as specified in the applicable repair instruction.
5. **NEW** Connect a battery charger to the vehicle.
6. **NEW** Remove the electric fuel pump fuse. Refer to the applicable wiring diagram using the VIN number of the vehicle in ISTA/D.
7. **NEW** Crank the engine for 10 seconds.
8. **NEW** After 10 seconds have elapsed, stop the starter, and allow the starter to cool for 20 seconds.
9. **NEW** Repeat steps 7 and 8 two additional times.
10. **NEW** Reinstall the electric fuel pump fuse and start the engine. Verify proper engine operation.

11. **NEW** After the engine has reached operating temperature, check the engine oil electronically or with the dipstick, and top up the engine oil as needed.
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WARRANTY INFORMATION

Not applicable.

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